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U. S. DEPARTMENT OF AGRICULTURE,

STATES RELATIONS SERVICE.

A. C. TRUE, Director.

FARM RECORDS AND ACCOUNTS.

SUGGESTIONS FOR TEACHING THE SUBJECT IN SECONDARY SCHOOLS.[1]

INTRODUCTION.

A good beginning in the application of better business methods to farming is the keeping of farm records and accounts. Such records are not only valuable in showing just what is being done, but are also essential as a basis for improved methods of management. Practice in accounting in connection with the work of the classroom and the farm has a high value as training in accuracy. One of the chief aims in teaching farm accounting should be to develop an appreciation of its value and to develop accuracy and neatness.

RELATION OF SUBJECT TO COURSE OF STUDY.

A phase of farm management.—Farm management may be defined as the business side of farming. As accounts of financial transactions and records of farm operations are intimately connected with the business administration of the farm, the giving of general instruction in farm records and accounts is commonly made either an integral part of the course in farm management or a separate course correlated closely with it. Such a general course should follow courses in agricultural production.

As a part of other courses.—The keeping of special records and accounts is so important in connection with efficient production of both animal and plant products that the subject should be considered in connection with special courses in animal husbandry, crop production, and horticulture. A course in dairying would be incomplete if dairy records were not considered. Likewise, a course in poultry husbandry should involve the special records and accounts essential to success in that line. Field crops, the orchard, and vegetable gardening are often considered with little reference to farm bookkeeping. If these subjects are to be worked out as practical projects, records and accounts must be considered.

Correlation with bookkeeping.—Wherever general bookkeeping is taught as a separate course there should be close correlation between that subject and farm accounts. If students have had the general

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[1] Prepared by H. P. Barrows, Specialist in Agricultural Education, under the direction of C. H. Lane, Chief Specialist in Agricultural Education, States Relations Service.

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principles of bookkeeping, with practice it should be a relatively simple matter for them to make the application to farm accounts. If bookkeeping is taught in rural high schools, after the general principles are mastered the teacher should allow students who are taking courses in agriculture, or who intend to become farmers, to make application of what they have learned to farm accounting, providing that subject is not considered in agriculture. The teachers of agriculture and bookkeeping should plan this phase of their work together, that there may be cooperation without duplication of work.

CLASSROOM INSTRUCTION.

Use of text.—In a course or a part of a course given over to farm records and accounts it will be most satisfactory to use one of the special texts upon the subject. Provision should be made for practice. In fact, the greater part of the work should be practice in the presence of the teacher, with the text used as a manual or guide. One lesson period out of three may be employed profitably in a discussion of principles and in a consideration of problems arising in working out the practice suggested in the text. As in any course in accounting, opportunity will be found for individual aid, for some students will make greater progress than others.

Use of bulletins.—In taking up the subject in connection with some special phase of agricultural production time will not be available to go into the general principles or practice in the extensive manner which the use of a text would involve. Nevertheless, it is essential that the students have a knowledge of the elemental principles of accounting in order to apply them to any special phase of farming. The following Farmers' Bulletins will be of service in such cases: No. 511, Farm Bookkeeping, and No. 572, A System of Farm Cost Accounting. Each student should secure copies of these bulletins, and one or two weeks, according to the time available, should be given to their consideration in the classroom.

PRACTICUMS AND PROJECTS.

A farm inventory.[1]—As the inventory is the most important farm record and forms the basis for general farm accounts, students should have practice early in the course in making an inventory of the home farm. Each student should be required to take such an inventory (if the student does not live on a farm he may be able to arrange to make an inventory of a neighboring farm), using the sample on pages 9 and 10 of Farmers' Bulletin No. 511 as a guide. This exercise may be considered a home practicum to accompany whatever practice may be given at the school.

Complete farm records and accounts.—To a student in farm management who lives at home on a fairly large farm may be assigned the

[1] See An Analysis of the Farm Business, Agricultural Education Monthly, Vol. II, No. 3, March, 1916.

task of keeping a complete set of records and accounts for the home farm for one year as a project. These records should be made the basis for an analysis of the farm business and remedies should be suggested for faulty management. If it is impossible to secure any remuneration for the student for this work, it should involve sufficient school credit to make it attractive. In cases where large dairy herds or poultry plants are kept on a farm, records and accounts of the one phase of farming will involve sufficient work and study to become separate projects.

Home-project accounts.—The home-project method of teaching agriculture affords an excellent opportunity for training in business methods. As each project is to be placed upon a business basis, it will involve the keeping of accurate records and accounts. Such records and accounts are kept for two purposes: First, that the student may know definitely how he is coming out on his project; second, that the teacher and other supervisors may have accurate information with regard to the work done. In most cases the latter information may be obtained from records which are essential for the student's own needs. All records which are not essential to the success of the project and which are unduly irksome for the student should be avoided. This question will form a fairly good test of the accounts and the supervision of the work: Will the student consider the records so essential to his success that he would be willing to continue them from his own choice?

The teacher should not lose sight of the educational value of the accounting phase of the project. In this work there is opportunity to develop judgment, accuracy, fairness, neatness, and good form. In order to facilitate this work simple forms should be furnished the student for all phases of each project. The following forms, which represent summaries and financial statements of representative projects, should be suggestive of forms adapted to other projects. These general summaries should also suggest the special accounts which the student must keep. For example, in connection with all projects separate accounts should be kept for both labor and cash; in connection with a poultry project egg records and incubator records should be kept; a project in dairying may involve records of daily milk production and feed used; and horticultural and crop projects may need separate records showing application of spraying and fertilizing material.

RECORD BLANK FOR POTATO PROJECT.

SOIL PREPARATION.

Character of soil.....
Date of plowing.....
Implements used.....
Depth plowed.....
Cost of plowing.....
Crop for five years past.....
Dates of harrowing.....
Implements used.....
Cost of harrowing.....
Condition of land when planted.....

CROP PLANTING AND CULTIVATION.

Variety of potatoes planted..... Kind of fertilizer.....
Kind of seed..... Amount of fertilizer per acre.....
Cost of seed and planting..... Cost of fertilizer.....
Depth of planting..... Dates of cultivation.....
Distance of planting..... Implements used.....
Percentage of stand..... Cost of cultivation.....

HARVEST AND YIELD.

Date of digging..... Yield in marketable potatoes.....
Method of digging..... How disposed of.....
Days from planting to digging..... Cost of harvest and marketing.....
Total yield.....
Remarks.....
.....

Approved:

.....*Teacher.*

.....Student Age.....
Post office..... School.....
County.....

Estimate the rental of your land and your time at a fair valuation. Count all commercial fertilizers at actual cost and barnyard manure at what it would bring in the district.

EXPENSES.

Rent of land.....	$.....
Preparation of seed bed:	
Horse labor.....	.....
Student's labor.....	.....
Cost of seed.....	.....
Cost of planting:	
Horse labor.....	.....
Student's labor.....	.....
Cost of fertilizer.....	.....
Cost of cultivation:	
Horse labor.....	.....
Student's labor.....	.....
Cost of digging:	
Horse labor.....	.....
Student's labor.....	.....
Cost of sacking, storing, and marketing.....	.....
Total cost.....	.....

RECEIPTS.

Total value of marketable potatoes, ... bushels, at.....	$.....
Value of cull potatoes, ... bushels, at.....	.....
Value of potatoes kept for seed, ... bushels, at.....	.....
Total receipts.....	.....
Net profit.....	.....

The following forms are used by the Division of Agriculture and Industrial Education of the State Department of Education in New York:

SUMMARY AND FINANCIAL STATEMENT OF A POULTRY PROJECT.

From....., 19.., to....., 19...

Pupil..... School.....
Address..... Number of birds.....
Variety.....

Month.	Feed consumed.			Cost of feed.								Eggs sold.		Fowls sold.		Labor.		
	Pounds grain.	Pounds mash.	All else.	Grain.		Mash		All else.		Total.		Number dozen.	Value.	Number.	Value.	Self.	Man.	Horse.
				$	c.	$	c.	$	c.	$	c.		$ c.		$ c.			
Jan.																		
Feb.																		
Mar.																		
Apr.																		
May.																		
June.																		
July.																		
Aug.																		
Sept.																		
Oct.																		
Nov.																		
Dec.																		
Total.																		

RATIONS.

Date.	Pounds corn.	Pounds wheat.	Pounds mixed grain.	Pounds corn meal.	Pounds wheat bran.	Pounds wheat middlings.	Pounds meat scraps.	Pounds mixed mash.	Pounds green feed.	Pounds shell.	Pounds grit.	Pounds litter.

SUMMARY.

Item.	Charges.		Credits.	
	Dollars.	*Cents.*	*Dollars.*	*Cents.*
Inventory				
Labor—self, man, and horse				
Feed				
Litter				
Fowls, dead				
Disinfectants				
Interest, depreciation, etc				
Crates, boxes				
Eggs (hatching)				
Chicks				
Cockerels				
Eggs (market)				
Fowls (market)				
Net profit				
Total				
Net profit per bird				

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SUMMARY AND FINANCIAL STATEMENT OF A GARDEN PROJECT.

From ....., 19.., to ....., 19...

Pupil ..... School .....
Address ..... Area of garden .....

Item.	Quantity.	Price.	Charges.	
			Dollars.	*Cents.*
Inventory				
Seed				
Chemicals—treating				
Chemicals—spraying				
Manure				
Fertilizers				
Lime				
Use of land				
Use of buildings				
Use of machinery				
Labor—self				
Labor—man				
Labor—horse				
Interest until money is returned				
Net profit				
Total				

Products marketed.	Quantity.	Price.	Credits.			
			Cash.		Home use.	
			Dollars.	*Cents.*	*Dollars.*	*Cents.*
Inventory						
Total						

SUMMARY OF LABOR AND FINANCIAL STATEMENT OF A ..... PROJECT.
(Crop.)

From ....., 19.., to ....., 19...

Pupil..... School.....
Address..... Area of crop.....acres.
Variety.....

SUMMARY OF LABOR.

Operation.	Hours of labor.			Operation.	Hours of labor.		
	Self.	Man.	Horse.		Self.	Man.	Horse.
Clearing land				Brought forward			
Draining				Mowing			
Plowing				Raking			
Harrowing				Tedding			
Rolling				Cocking			
Seed preparation				Cutting			
Seed treatment				Setting			
Marking				Shocking			
Seeding—planting				Husking			
Weeding				Pulling			
Thinning				Digging			
Spraying				Picking			
Cultivating				Grading			
				Cleaning for market			
				Marketing			
Forwarded				Total			

SUMMARY AND FINANCIAL STATEMENT.

Item.	Quantity.	Price.	Charges.		Credits.	
			Dollars.	*Cents.*	*Dollars.*	*Cents.*
Inventory						
Seed						
Chemicals—treating						
Chemicals—spraying						
Manure						
Fertilizers						
Lime						
Rent						
Labor—self						
Labor—man						
Labor—horse						
Interest						
Use of equipment						
Use of buildings						
Products marketed						
Net profit or loss						
Total						

SUMMARY OF LABOR AND FINANCIAL STATEMENT OF A ..... (Fruit.) PROJECT.

From ....., 19— to ....., 19—.

Pupil..... School.....
Address..... Area of project.....acres.
Variety .....plants.

SUMMARY OF LABOR.

Operation.	Hours of labor.			Operation.	Hours of labor.		
	Self.	Man.	Horse.		Self.	Man.	Horse.
Clearing land				Brought forward			
Plowing				Pruning			
Harrowing				Renovation			
Rolling				Cutting out blight			
Draining				Cutting out canker			
Marking				Grafting			
Treating stock				Renewing			
Pruning stock				Trellising			
Planting				Rodent protection			
Cultivating				Mulching			
Hoeing				Winter protection			
Sowing cover crop				Picking			
Sowing intertilled crop				Grading			
				Packing			
Care of intertilled crop				Hauling			
				Marketing			
Turning crop under							
Spraying, first							
Spraying, second							
Spraying, third							
Spraying, fourth							
Spraying, fifth							
Thinning							
Forwarded				Total			

SUMMARY AND FINANCIAL STATEMENT.

Item.	Quantity.	Price.	Charges.		Credits.	
			Dollars.	*Cents.*	*Dollars.*	*Cents.*
Inventory						
Seedlings						
Plants						
Seed						
Insecticides						
Fungicides						
Manure						
Fertilizers						
Lime						
Barrels, boxes, and crates						
Rent						
Labor—self						
Labor—man						
Labor—horse						
Transportation						
Commission						
Interest						
Products marketed						
Net profit						
Total						

SUMMARY AND FINANCIAL STATEMENT OF A ..... PROJECT.
(Animal)

From....., 19—, to ....., 19—. Cr.

Pupil..... School.....
Address..... Number of animals.....
Breed.....

Date.	Pounds grain fed.	Pounds roughage fed.	Cost of feed.					
			Grain.		Roughage.		Total.	
			Dollars.	*Cents.*	*Dollars.*	*Cents.*	*Dollars.*	*Cents.*
Jan.								
Feb.								
Mar.								
Apr.								
May.								
June.								
July.								
Aug.								
Sept.								
Oct.								
Nov.								
Dec.								
Total.								

Date.	Products sold.	Quantity.	Price.	Total.	
				Dollars.	*Cents.*
Jan.					
Feb.					
Mar.					
Apr.					
May.					
June.					
July.					
Aug.					
Sept.					
Oct.					
Nov.					
Dec.					
Total.					

Summary.	Charges.		Credits.	
	Dollars.	*Cents.*	*Dollars.*	*Cents.*
Labor—self.				
Labor—man.				
Labor—horse.				
Feed.				
Bedding.				
Pasture.				
Interest.				
Depreciation.				
Use of buildings.				
Use of equipment.				
Miscellaneous.				
Young stock.				
Manure.				
Products marketed.				
Inventory.				
Net profit.				
Total.				

The following form for an individual cow record is used by the Agricultural Education Service of the Massachusetts State Board of Education, furnished to that board by the Massachusetts Agricultural Extension Service:

INDIVIDUAL COW ACCOUNT.

Cow's number..... Cow's name ..... Weight ..... lbs. Breed ..... Registry number ..... Born .....
Owner..... Dropped last calf ....., 19... Dam's name and number ..... Breed ..... Age .....
Address..... Dairy Improvement Association .. Sire's name ..... Breed ..... Register number .....

Date.	Yield for month.			Yield to date.			Grain and roughage one month.													Cost.				Balance.		Pounds digestible nutrients in daily rations.			Remarks.
	Pound milk.	Test.	Pounds fat.	Pounds milk.	Pounds fat.	Price of 1 pound milk.	Total value.	Gluten feed.	Mixed hay.	Dried corn fodder.	Wheat bran.	Gluten meal.	Dried beet pulp.	Cottonseed meal.	Pasturage.	Oat straw.	Linseed oil meal.	Corn fodder.	Grain.	Roughage.	Total.	1 quart milk or 1 pound fat.	Total cost to date.	Profit.	Loss.	Returns for $1.	Protein.	Carbohydrates and fat.	Nutritive ratio.	
1913-14.....																													
Oct.....																													
Nov.....																													
Dec.....																													
Jan.....																													
Feb.....																													
Mar.....																													
Apr.....																													
May.....																													
June.....																													
July.....																													
Aug.....																													
Sept.....																													
Totals.....																													

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